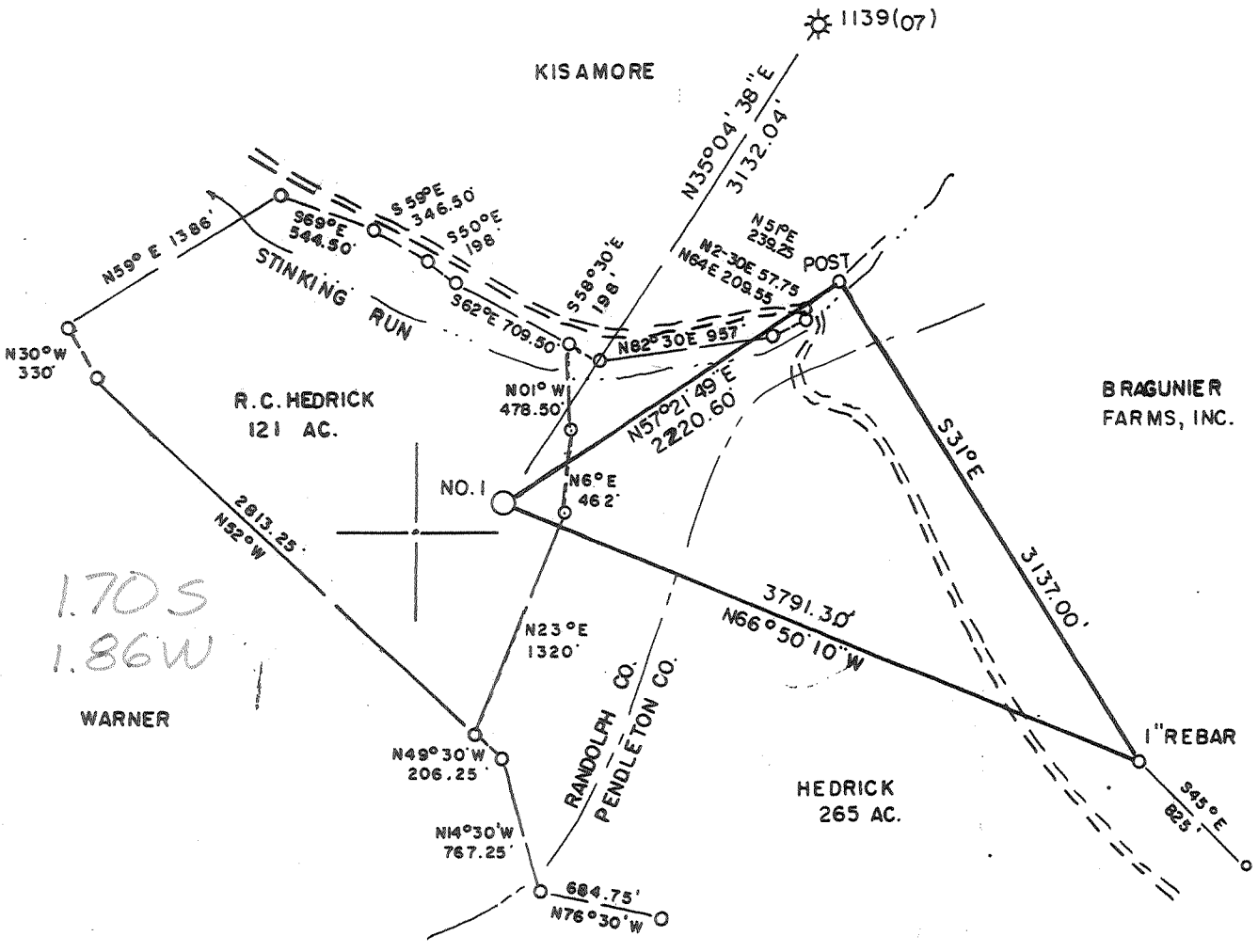


WELL REFERENCES :

N82° 30' W, 138' TO 14" HICKORY  
S 22° W, 162' TO 6" SUGAR

LONGITUDE 79° 30' 00"



1.70 S  
1.86 W  
WARNER

LAND SURVEYING SERVICES  
21 CEDAR LANE  
BRIDGEPORT, WV 26330  
PHONE: 304-842-2018

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION Rd. inter. 2850' NW of location Elev. = 2859'

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.

(SIGNED) \_\_\_\_\_  
 R.P.E. \_\_\_\_\_ L.L.S. 674  
 Stephen D. Losh

PLACE SEAL HERE

WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS  
 #10 McJUNKIN ROAD  
 NITRO, WEST VIRGINIA 25143-2506



DATE August 26, 19 97  
 OPERATOR'S WELL NO. Hedrick #1  
 API WELL NO. \_\_\_\_\_

47 083 01141  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP X SHALLOW \_\_\_

LOCATION: ELEVATION 3260.76' WATER SHED Stinking Run  
 DISTRICT Dry Fork COUNTY Randolph  
 QUADRANGLE Whitmer 7.5 min.

SURFACE OWNER Riley C. Hedrick ACREAGE 20  
 OIL & GAS ROYALTY OWNER Riley C. Hedrick LEASE ACREAGE \_\_\_\_\_

PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE \_\_\_ PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION Oriskany ESTIMATED DEPTH \_\_\_\_\_  
 WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT \_\_\_\_\_  
 ADDRESS Rt. 3, Box 583 ADDRESS Rt. 3, Box 583  
 Clarksburg, WV 26301 Clarksburg, WV 26301

OCT 10 1997

DEEP WELL

6-6 000

COUNTY NAME PERMIT

683-1141

24266

STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

678

Well Operator: Cabot Oil & Gas Corporation 8145 (2)

Operator's Well Number: R. Hedrick #1 3) Elevation: 3260.76'

Well Type: a) Oil \_\_\_ / or Gas x /  
b) If Gas: Production x / Undergound Storage \_\_\_ /  
Deep x / Shallow \_\_\_ /

Issued 10/08/97  
Expires 10/08/99

5) Proposed Target Formation(s): Oriskany 475

6) Proposed Total Depth: 8600 feet

7) Approximate fresh water strata depths: 122', 474'

8) Approximate salt water depths: N/A

9) Approximate coal seam depths: N/A

10) Does land contain coal seams tributary to active mine? Yes \_\_\_ / No x /

11) Proposed Well Work: Drill & complete a gas well based on Randolph 1139.

12)

CASING AND TUBING PROGRAM

RECEIVED  
Environmental Protection  
Office of Oil & Gas  
SEP 08 1997  
Permitting

3805RB11.3  
3805RB11.2.2

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For Drilling	Left in Well	Fill-up (cu. ft.)
Conductor	13 3/8"	L.S.	54.5#	80'	80'	80 SKS (GFS)
Fresh Water	9 5/8"	J-55	36#	1600'	1600'	530 SKS (CTS)
Coal						
Intermediate	*7	J-55	20#	3000'	3000'	450 SKS (CTS)
Production	4 1/2"	N-80	11.6#	8550'	8550'	200 SKS
Tubing						
Liners						

3805RB11.1

PACKERS: Kind \_\_\_\_\_  
Sizes \_\_\_\_\_  
Depths set \_\_\_\_\_

For Office of Oil and Gas Use Only

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond \_\_\_\_\_  Agent  
(Type)

\*7 to be run, at Company's discretion, only if water is encountered below 9 5/8" and causes problems drilling well to T.D.

needs check & plat

24



STATE OF WEST VIRGINIA  
**OIL AND GAS CONSERVATION COMMISSION**  
#10 McJUNKIN ROAD  
NITRO, WEST VIRGINIA 25143-2506

October 6, 1997

Division of Environmental Protection  
Office of Oil and Gas  
Nitro, West Virginia

Re: Application for Permit #47-083-01141 to drill deep well.

COMPANY: Cabot Oil and Gas Corporation

FARM: Riley C. Hedrick #1

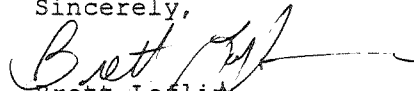
COUNTY: Randolph DISTRICT: Dry Fork QUAD: Whitmer

The application of the above company is Approved for Oriskany.  
(Approved or Disapproved)

Applicant has complied with the provisions of Chapter twenty-two, eight (22-8), of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

- 1.) Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owner; **yes**
- 2.) Provided a tabulation of all deep wells within one mile of the proposed location, including the Api number of the deep well, well name, and the name and address of operator and; **\*yes**
- 3.) Provided a plat showing that the proposed location is a distance of **400+** feet from the nearest unit boundary and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location.

Sincerely,

  
Brett Loflin  
Engineer

\*3,132 feet to 47-083-01139

Post-it® Fax Note 7671		Date	10-6	# of pages	1
To	Brett Loflin		From	Jeff Keim	
Co./Dept.			Co.		
Phone #			Phone #	(412) 299-7050	
Fax #	(304) 759-0529		Fax #		



Cabot Oil & Gas Corporation

October 6, 1997

Via Facsimile (304) 759-0529  
and Regular Mail

State of West Virginia  
Division of Environmental Protection  
Office of Oil & Gas  
10 McJunkin Road  
Nitro, WV 25143-2506

ATTN: Brett Loflin

RE: R. Hedrick #1 Well  
Dry Fork District  
Randolph County, WV  
COGC Lease File No. 47-10347

Dear Brett:

Please be advised that I have reviewed the lease file, lease plat and well site plat and find that the referenced location is legally located from all applicable lease lines.

The plat prepared by Steven D. Losh dated August 26, 1997 reflects some interior tract lines and not lease lines, giving the appearance that the well is illegally located in that it is not more than 400 feet from the eastern-most line depicted on the plat. My review indicates that the well is, in fact, located more than 400 feet from all lease lines.

Please advise if you need any further information in this matter.

Very truly yours,

Jeffrey L. Keim  
Regional Land Manager

JLK/aw

cc: Ray Prudnick

**RECEIVED**  
WV Division of  
Environmental Protection  
SEP 03 1997  
Permitting  
Office of Oil & Gas

- 1) Date September 4, 1997
- 2) Operator's well number  
**Hedrick #1**
- 3) API Well No 47 - 083 - 1141  
State County Permit

**STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS**

**NOTICE AND APPLICATION FOR A WELL WORK PERMIT**

- 4) Surface Owner(s) to be served
  - (a) Name Riley C. Hedrick  
Address HC 73, Box 3  
Seneca Rocks, WV 26884-9222
  - (b) Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (c) Name \_\_\_\_\_  
Address \_\_\_\_\_
- 5) (a) Coal Operator
  - Name Not Operated  
Address \_\_\_\_\_
  - (b) Coal Owner(s) with Declaration
    - Name N/A  
Address \_\_\_\_\_
    - Name N/A  
Address \_\_\_\_\_
  - (c) Coal Owner with Declaration
    - Name \_\_\_\_\_  
Address \_\_\_\_\_
- 6) Inspector Phillip Tracy  
Address Route 2, Box 37-A  
Montrose, WV 26283  
Telephone (304)626-0787

**TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:**

Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas **OR**

Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_\_\_ on the above named parties, by:

Personal Service (Affidavit attached)

Certified Mail (Postmarked postal receipt attached)

Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Capon Oil & Gas Corporation  
By John W. Colshire  
Its Geologist  
Address 400 Fairway Drive Suite 400  
Coraopolis, PA 15108  
Telephone (412)299-7000

Subscribed and sworn before me this 4th day of September, 19 97  
Cynthia M. Stegenga Notary Public

My commission expires \_\_\_\_\_

Notarial Seal  
Cynthia M. Stegenga, Notary Public  
West Bethlehem Twp., Washington County  
My Commission Expires June 17, 2000  
Member, Pennsylvania Association of Notaries

WR-35

Date: 1-Sept-98  
API # 47-083-01141

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work

Farm name: Hedrick, Riley C. Operator Well No.: R. Hedrick #1

LOCATION: Elevation: 3,260.76 Quadrangle: Whitmer  
District: Dry Fork County: Randolph  
Latitude: 8,780 feet South of 38 DEG. 52 MIN. 30 SEC.  
Longitude: 9,970 feet West of 79 DEG. 30 MIN. 0 SEC.

Company: Cabot Oil & Gas Corporation  
400 Fairway Drive: Suite 400  
Coraopolis, PA 15108-4308

Agent: John Abshire  
Inspector: Phillip Tracy  
Permit Issued: 10/8/97  
Well Work Commenced: 12/17/97  
Well Work Completed: 2/13/98  
Verbal Plugging  
Permission granted on:  
Rotary X Cable        Rig         
Total Depth (feet) 8679'  
Fresh Water Depths (ft) 230'  
        
Salt Water Depths (ft)         
        
Is coal being mined in area (Y / N)?        N  
Coal Depths (ft)       

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill up Cu. Ft.
13-3/8"	63'	63'	15 sks Class "A"
9-5/8"	1629'	1629'	530 sks Class "A"
4-1/2"	8635'	8635'	375 sks Class "A"

OPEN FLOW DATA

Producing formation Lower Oriskany Pay zone depth (ft) 8446' - 8456'  
Gas: Initial open flow -- MCF/d Oil: Initial open flow N/A Bbl/d  
Final open flow 119 MCF/d Final open flow N/A Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock pressure 1800 psig (surface pressure after 48 Hours)

Second producing formation        Pay zone depth (ft)         
Gas: Initial open flow        MCF/d Oil: Initial open flow        Bbl/d  
Final open flow        MCF/d Final open flow        Bbl/d  
Time of open flow between initial and final tests        Hours  
Static rock pressure        psig (surface pressure after        Hours)

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: CABOT OIL & GAS CORPORATION

By: *Ray Prudnick Jr.*  
Date: 9-2-98

SEP 14 1998

RAN 11/1

**OPEN FLOW DATA**

Perf'd Lower Oriskany @ 8446' - 8456'. Broke down with 250 gals of 15% HCl acid. BDP: 5000 psi. ISIP: 2500 psi. Pumped 750 gals of 15% HCl acid with 60 perf balls and displaced with 430 bbls of treated water @ 12 bbl/min and 3600 psi. Fractured well with 1400 bbls of treated fluid with 78,500# of 20/40 mesh sand. ATP: 3500 psi. MTP: 4404 psi. AIR: 22 bpm. ISIP: 3180 psi.

FORMATION	TOP	BOTTOM	REMARKS
Soil/Fill	0	2	
Sand/Shale	2	2188	
Shale/Sand	2188	2431	
Shale	2431	2717	
Sand	2717	2800	
Shale/Sand	2800	3148	
Sand	3148	3262	
Shale/Sand	3262	4275	
Shale	4275	4454	
Shale/Sand	4454	5110	
Shale	5110	6581	
Sand	6581	6601	
Shale	6601	7447	
Tully	7447	7482	
Shale	7482	7504	
Tully	7504	7533	
Shale	7533	7878	
Upper Marcellus	7878	7933	
Purcell	7933	7990	
Lower Marcellus	7990	8072	
Onondaga	8072	8177	
Huntersville	8177	8272	
Needmore	8272	8328	
Oriskany	8328	8560	
Helderberg	8560	8679 - TD	